

REGULATORY IMPACT STATEMENT

INTRODUCTION

This proposed rulemaking will revise 6 NYCRR Part 326 by amending paragraphs 326.2(c)(15) and 326.2(c)(16). In addition, paragraph 326.2(c)(17) will be added to prohibit the sale, possession, and use of pesticide products containing chlorpyrifos.

The Department of Environmental Conservation's (DEC) statutory authority associated with the proposed regulations is outlined in Section 1 below. Section 2 summarizes relevant legislative objectives, and Section 3 discusses the needs and benefits of the proposed regulations. An assessment of the potential costs associated with the proposed regulations is found in Section 4. Mandates on local government are described in Section 5, while sections 6 through 8 address the paperwork requirements, whether the regulations duplicate other federal and state programs, and alternatives to the proposed rules. Sections 9 and 10 describe the applicability of any federal programs to the activities covered by the proposed regulations and the compliance schedule of the proposed rules for the regulated community. Section 11 describes the review of the rule.

1. STATUTORY AUTHORITY

The Department's statutory authority to promulgate regulations related to the sale, possession, and use of pesticides is found in:

- ECL 1-0101 declares a policy of the state to conserve, improve and protect its natural resources and environment and to prevent, abate and control water, land and air pollution in order to enhance the health, safety and welfare of the people of the state and their overall economic and social wellbeing.
- ECL 3-0301 empowers the Commissioner to adopt rules and regulations as may be necessary to carry out the environmental policy of the State set forth in section 1-0101.
- Environmental Conservation Law (ECL) Article 33, Pesticides.
 - Section 33-0301 declares it to be in the public interest of the State to regulate the registration, commercial use, purchase and custom application of pesticides to ensure the protection of public health, property and wildlife and require persons to register or obtain permits before engaging in activities involving pesticides.
 - Section 33-0303 authorizes the Commissioner to promulgate regulations to implement and give full force and effect of the provisions of Article 33.
 - Section 33-0303(3) authorizes the Commissioner to, among other things, promulgate a list of restricted use pesticides and the usages of such pesticides

that may be permitted subject to whatever conditions or limitations which the Commissioner deems appropriate to fully protect the public interest.

2. LEGISLATIVE OBJECTIVES

The New York State Assembly and Senate passed legislation in 2019 amending Section 33-1301 of the New York Environmental Conservation Law to completely prohibit the use of chlorpyrifos by December 1, 2021. This legislation was intended to add a new subdivision to phase out use of chlorpyrifos over two years. However, the Governor vetoed the bill and directed DEC, the State agency responsible for pesticide product regulation, registration and enforcement, to adopt regulations to prohibit the use of pesticide products containing chlorpyrifos based upon data available on chlorpyrifos exposures. To accomplish this directive, and on the basis of the available data, the DEC is proposing a regulation that will prohibit the sale, possession, and use of pesticide products containing chlorpyrifos to protect environmental resources, pollinators, pesticide applicators, agricultural workers, and the public.

3. NEEDS AND BENEFITS

DEC proposes to revise 6 NYCRR Part 326 by amending paragraphs 326.2(c)(15) and 326.2(c)(16). In addition, paragraph 326.2(c)(17) will be added to prohibit the sale, possession, and use of pesticide products containing chlorpyrifos.

The Governor, the New York State Legislature, and others expressed concerns over chlorpyrifos exposure to people; natural resources, including pollinators; and the environment. These concerns led DEC to review a summary of chlorpyrifos exposure information compiled by the United States Environmental Protection Agency (EPA), the New York State Department of Health (NYDOH) Bureau of Toxic Substance Assessment, and the California Department of Pesticide Regulation's chlorpyrifos human health risk assessment and mitigation documents.

Chlorpyrifos is an organophosphate pesticide, which is currently registered in New York State for use in fifty different products, the majority of which are approved for use in agricultural production. The largest agricultural market for chlorpyrifos in terms of total pounds of active ingredient is corn. It is also used on soybeans, fruit and nut trees, brussels sprouts, onions, broccoli, cauliflower, and seed treatments, as well as other row crops and in greenhouses. Non-agricultural uses include turf and golf courses. Chlorpyrifos has not been registered for residential use since 2001.

In some cases, chlorpyrifos containing pesticides are the only available products labeled for use against certain pests. They are effective in protecting fruit crops against the American plum borer and black stem borer. Chlorpyrifos containing pesticide products can be important tools to use in rotation with other pesticides and other methods of pest management, such as treated seeds, as a means of managing pesticide resistance. As New York and nearby states are infiltrated by invasive species, such as the black stem borer, pest management tools are needed to prevent their spread and ensuing damage if left unchecked.

It is well documented that chlorpyrifos inhibits the enzyme acetylcholinesterase, which is critical for neurological functions. It is also associated with developmental neurotoxicological effects. EPA noted in its 2016 risk assessment of chlorpyrifos that there is a breadth of information available on the potential adverse neurodevelopmental effects in infants and children as a result of prenatal exposure to chlorpyrifos. However, there has been some controversy and debate over the extent of its potential human health impacts and the levels at which those impacts occur.

Risks associated with chlorpyrifos have been assessed several times by EPA as part of its registration review process, in 2011, 2014, and again in 2016. Each assessment built upon or refined some aspect of the previous one in light of more current information. The risk assessments identified a number of exposure scenarios that posed unacceptable risk based in part on studies indicating potential adverse neurodevelopmental effects in children at low exposure levels. Nevertheless, in 2017, EPA issued a Denial Order (Order) to a petition that sought its early decision on chlorpyrifos registration. That Order indicated that, while safety questions were raised from the results of certain epidemiological studies, the findings were not consistent with other scientific research and they raised novel, highly complex scientific issues that required further evaluation. EPA is currently undergoing registration review of chlorpyrifos and has recently released their revised draft ecological risk assessment and draft human health risk assessment associated with the registration review of chlorpyrifos. A final decision is scheduled for October 2022.

EPA's September 15, 2020, draft ecological risk assessment for registration review provided a biological evaluation on chlorpyrifos. The summary included in this assessment indicates that chlorpyrifos may have contributed to a number of adverse incidents associated with aquatic species, birds, crops, and terrestrial invertebrates, including bees. In addition, the September 21, 2020 draft human health risk assessment for registration review indicates that although residential post-application and many occupational risk estimates for chlorpyrifos are not a concern, occupational handler risk estimates remain a concern and that the neurodevelopmental effects from chlorpyrifos still remain uncertain.

The California Department of Pesticide Regulation also evaluated the exposures and risks associated with chlorpyrifos and designated it a toxic air contaminant in accordance with its regulations and based on potential exposures to bystanders due to spray drift, possible hand to mouth exposure by children, and exposure through food and drinking water. Its primary concerns were potential health effects from dermal and inhalation exposures due to spray drift. Their regulations prohibit some chlorpyrifos uses and significantly restrict others. Hawaii has also restricted chlorpyrifos uses and Oregon has proposed regulations restricting its use as well.

Exposure incident reports reviewed by NYSDOH revealed a total of about 280 incidents of human exposure to chlorpyrifos between January 2002 and January 31, 2020 nationwide. One quarter of those were attributed to occupational exposures through misapplication, spray drift, spillage, or standard labeled use of the product. Three quarters were attributed to non-occupational exposures. At least half of the incidents were considered residential exposures. The type of product (residential or agricultural) could be determined from a few reports. Two incident reports involved turf use pesticide products. Twenty-six incident reports involved

exposures to agricultural pesticide products. Half of those were residential exposures, mostly due to spray drift from an adjacent field.

NYSDOH found 17 incident reports of human exposure to chlorpyrifos that occurred in New York State. Of these incident reports, 15 were classified as residential exposures, 1 occupational exposure and 1 unknown. For adverse events where a product was identified, none were attributed to use of chlorpyrifos by aerial or tree-trunk application.

Although the reviewed data sources are limited in that the incidents are self-reported and subject to recall bias and incomplete/inaccurate information, and exposure is not quantified, they do indicate that New Yorkers, as well as residents of other states, have been exposed to chlorpyrifos either by applying it themselves or as innocent bystanders.

In addition, Cornell's Neonicotinoid Insecticides in New York State Economic Benefits and Risk to Pollinators report (Travis A. Grout, Phoebe A. Koenig, Julie K. Kapuvári & Scott H. McArt; 2020) did not specifically focus on the uses of chlorpyrifos but mentioned chlorpyrifos as posing a substantial risk to bees in certain situations, for instance, in areas adjacent to orchards.

In light of all these factors, and to fulfill the intent of the Assembly and Senate's proposed legislation and the Governor's directive to protect New Yorkers from potential exposure while the scientific studies and assessments continue, DEC is proposing regulations to prohibit the sale, possession, and use of pesticide products containing chlorpyrifos. This proposal is being pursued even though chlorpyrifos may be the only available product labeled for use in limited instances against certain pests. It is anticipated that alternatives to pesticide products containing chlorpyrifos for these limited uses will be researched and developed due to this prohibition.

4. COSTS

Costs to Industry:

This proposed rulemaking designates pesticide products containing chlorpyrifos as prohibited pesticides. Since businesses will not be able to use chlorpyrifos, pesticide applicators may need to use alternative pesticides and/or additional pest management practices that may be more expensive or less cost effective. Fiscal information received from the agricultural industry and educational institutions indicate that alternatives to chlorpyrifos for agricultural pest control purposes can cost substantially more per acre to control certain pests. For example, at the lower label rates, some alternatives to chlorpyrifos may cost up to ten times more per acre and at the higher label rates the alternative may cost almost two to three times more per acre.

As mentioned above, for some agricultural pests, there are few or no available alternatives. In those cases, costs may increase at least temporarily until alternative products are available or integrated pest management techniques are developed. For example, one California study on chlorpyrifos use on alfalfa (Chlorpyrifos Use in Alfalfa – Defining and Refining Critical Uses; Goodell, Berger, Long, Hays and Halsey; 2014), which is not a major crop in New York, indicated that on average use of alternatives could cost about one third more than use of

chlorpyrifos products. Some new alternative methods will likely be developed by California's Alternatives to Chlorpyrifos Work Group. They have a plan to invest in and develop short (within 1 year), intermediate (within 5 years) and long term (beyond 5 years) alternatives that will likely have significant application nationwide. These will provide even more options over time than are already available for growers and other users.

Although the costs may be more per acre to apply alternative pesticides, it is common practice for applicators to rotate pesticide active ingredients and pest management methods in order to minimize the possibility of pests developing resistance to one type of pesticide product or active ingredient. Therefore, in general, switching from one product to another is a normal business practice which may already be accounted for by growers and applicators who use chlorpyrifos.

DEC recognizes that costs could increase significantly in individual cases depending on the target pest, target site and area, method of application, quantity of product used, and many other case-specific factors. However, it is also worth noting that the cost of chlorpyrifos products is generally low compared with other comparable pesticides and annual reports of chlorpyrifos sales and use in New York from 2013 through 2016 indicate relatively little use in the state. Considering all these factors, and the fact that, in general, the cost of using different products is already accounted for in normal business operations, using an alternative pesticide product should not significantly affect users overall.

There are also some costs to registrants and distributors of chlorpyrifos products who may have to recall or arrange for reverse distribution of their products from customers. Without reverse distribution, customers who already have the products will have to dispose of them. There is also the possibility of a temporary disruption of business as well as costs to develop redistribution networks to ensure the product is not sold into the state.

Costs to DEC and the State:

The regulatory costs of this prohibition lie with DEC for implementation and administration of the regulatory program. Initially, it is anticipated that this prohibition may increase costs through staff time associated with compliance assistance efforts. It is anticipated that this will decrease as existing stocks of chlorpyrifos decrease.

Pesticide costs for invasive species and public health pest control by state agencies may increase for the same reasons as the costs to industry associated with the use of alternative products and methods. Alternatives may be more expensive than the chlorpyrifos products, but it is anticipated that the cost impacts will generally be minimal as pesticides are generally used in rotation with other pesticides and pest management methods.

Costs to Local Governments:

Local governments may need to use alternative pesticides, if they are unable to use chlorpyrifos. If this occurs, alternatives may be more expensive than the chlorpyrifos products, but it is anticipated that the cost impacts will generally be minimal as pesticides are generally used in rotation with other pesticides and pest management methods.

5. LOCAL GOVERNMENT MANDATES

This proposal does not directly mandate the expenditure of funds by local government agencies.

6. PAPERWORK

This proposal does not require any paperwork.

7. DUPLICATION

The proposed regulations will not duplicate any other federal or state regulations or statutes. The proposal is a prohibition related to the sale, possession, and use of chlorpyrifos in New York.

8. ALTERNATIVE APPROACHES

The no action alternative would continue to allow the sale, possession, and use of pesticide products containing chlorpyrifos that may have impacts on the environment, natural resources, and people. This alternative was rejected since it did not provide enough protection for the environment, natural resources, and people of the State.

Limiting the use of pesticide products containing chlorpyrifos for only critical pest management needs where no other pest management alternatives are available may still have impacts on the environment, natural resources, and people. Therefore, this alternative was rejected.

9. FEDERAL STANDARDS

Under the Federal Insecticide, Fungicide, and Rodenticide Act, (FIFRA), specifically 7 U.S.C. 136v, a State may regulate the sale or use of any federally registered pesticide in the State but only if, and to the extent, the regulation does not permit any sale or use prohibited by FIFRA. Currently, chlorpyrifos is registered with EPA, allowing it to be sold and used in New York and other states. This proposal would exceed the federal minimum standards in that the sale and use of chlorpyrifos would be prohibited in New York.

10. COMPLIANCE SCHEDULE

Compliance with this proposed rulemaking will be required upon the effective date of the final rule.

11. INITIAL REVIEW OF RULE

DEC will conduct an initial review of the rule within three years as required by SAPA § 207.